

# Saguaro Astronomy Club

Metro Phoenix, Arizona

## *SACNEWS*



February 1996 — Issue #229

v1.28

## Texas Star Party '95

by Bernie Sanden

Night life in West Texas takes on a special meaning every May as hundreds of dark sky seekers converge on Prude Ranch, located just outside Fort Davis, Texas. Fort Davis is a small ranching community near McDonald Observatory, surrounded by vast, open range land far from the noise, smog, and lights of any city. During the dark-of-the-month, hundreds of deep sky enthusiasts gather for a week of hearty observing. The tools they wield are often large, a 12" or 13" scope pales besides the mighty 18" and 25" skyscrapers which seem to sprout randomly about the telescope fields. Besides having skies above which reveal the cosmos on par with nearly any other location in the lower 48, the southern site allows those hailing from more

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**The [people at TSP] impressed me as being highly-knowledgeable deep sky observers**

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northerly locales to see a swath of the heavens not normally available to them and one of the better swaths, at that! This year was heavily attended, with hundreds of scopes in use on the various observing fields beneath the star-studded skies.

Monday May 22nd; the first official day of the Texas Star Party (TSP) started with clear blue skies. We arrived late-morning after an 11 hour pilgrimage from Tempe. "We" is short for Tom Polakis, Riku Henriksson, and myself. Riku made the pilgrimage from his home in Finland in order to visit friends in the USA and hopefully bag a week of dark-sky observing in temperatures above freezing, something rarely done in Finland. Auroral activity in Texas was also expected to be minimal, which Riku was counting on.

What we were not counting on but understood was the climate of this piece of real estate. Call it a CFR (cloud-forming region) or a PITA (pain in the ... um, aperture), but this place has some notoriety attached. Perhaps only Arizonans are sufficiently spoiled to whine about the

### Quick Calendar

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#### SAC Meeting

Speaker: Chris Schur, Astrophotography  
**7:30 PM, Friday, February 2**

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#### SAC Star Party

Buckeye Hills Recreation Area  
**Saturday, February 10**

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### Membership Renewals are Due

Please Check Your Mailing Label

hit-and-miss prospects of late spring clear skies in West Texas, but I did notice the special attention the satellite image received in the Prude Ranch lobby. Sure enough, Tom hinted to us of trouble when he spotted the first puff of seemingly innocent cumulus rising above the hills to the east. It steadily grew and expanded, then seemed to divide and multiply. By sunset the sky was filled with both high and low level cloud cover. Undaunted and with an air of defiance, Barbara Wilson of the Houston Astronomical Society cranked the volume on her boom box to fill the upper field with a fitting TSP anthem "Texas," unknowingly served up by Chris Rea. As a group collected near fellow Houston club member Larry Mitchell's 36" Obsession, the Party was on, with or without stars.

Waiting it out while swapping stories is the general rule of thumb at TSP (interesting story about hunting

### SAC Officers

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President	Gerry Rattley	892-5698
Vice President	Steve Coe	789-7786
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Secretary	David Fredericksen	979-0513
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DIM MOMENTS  
IN  
**AMATEUR  
ASTRONOMY**  
by Paul Dickson

DEFINITIONS  
MOON-DAZED

SUDDENLY  
FINDING THE  
FULL MOON  
IN A LARGE  
APERTURE  
TELESCOPE

down Palomar globulars, but what's this about Marfa lights??). By 11 PM, there were openings in the cloud cover, and by midnight it was clear down to 5 degrees of the horizon in every direction. Larry's scope was put to immediate use hunting down faint galaxy clusters and I took up position at my scope to begin feasting on the celestial servings. Steadily the sky improved, although the dew settled in for an extended course, as well. Although my observing sheets felt like wet napkins, I managed to devour a half dozen objects on my self-prepared "deep south" observing menu before the Moon made its appearance. Watching the 24-day old Moon rise over the far hills at 50X, with a chaparral scrub bush silhouetted in front, was the icing on the cake. The TSP had arrived in full and my observational hunger-pangs were over.

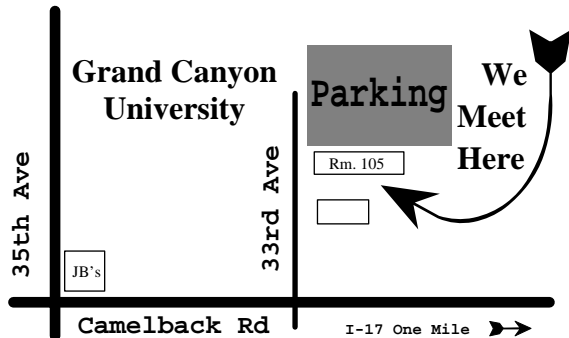
In a rather uncanny pattern, each night yielded about the same percentage of clear dark hours as the next,

perhaps half of each being observationally usable. All but the last night started with various degrees of cloud cover, which gradually diminished as the night progressed. The last night started out wonderfully clear, but the sky slammed shut by 2 AM. In any event, those fortunate to stay the week had plenty of time to add generously to their observing lists.

Observing under these skies was the main pursuit of course, with most of the extraordinary views beheld at the eyepieces of the "skyscrapers." Riku came without a scope (which by the way, is not a handicap—just ask Tom Bopp!), but not without an agenda. I marveled as he painstakingly drew and described nearly every object he viewed. By the end of the week, he had a stack of observing cards a couple inches thick. Riku is the leader of the Deep Sky Section in his local astronomy club. Although it might seem unlikely given the local observing conditions

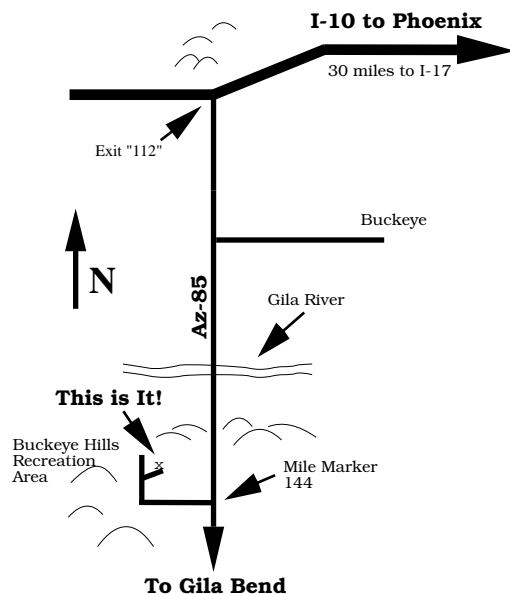
## Directions to SAC Events

**SAC General Meetings 7:30 PM at Grand Canyon University, Fleming Building, Room 105** — 1 mile west of Interstate 17 on Camelback Rd., north on 33rd Ave., second building on the right.



**SAC Deep Sky Subgroup Meeting at John & Tom McGrath's, 11239 N. 75th St., Scottsdale, 998-4661** — Scottsdale Rd. north, Cholla St. east to 75th St., southeast corner.

**SAC Star Parties at Buckeye Hills Recreation Area** Interstate 10 west to Exit 112 (30 miles west of Interstate 17), then south for 10.5 miles, right at entrance to recreation area, one-half mile, on the right. No water and only pit toilets. Please arrive before sunset; allow one hour from central Phoenix.



(frigid cold, midnight sun, persistent auroral activity, no Omega Centauri!), my impression is that they are an extremely accomplished observing group. One of his main pursuits was to draw his eyepiece view of as many of the Hickson galaxy clusters as possible, thus spending a lot of time around the 'scrapers. As for myself, one of the most memorable views was of the interacting "Ring-Tail" galaxies, NGC 4038-9 in Corvus, through Larry Mitchell's 36" Obsession. Both "antennae" were faint but at least partially visible, forming delicate arcs beyond the main galactic bodies. The northernmost arc was readily appar-

ent—perhaps 3 arc minutes in length, while a portion of the thinner southern arc could be glimpsed with some patience and averted vision. The view, imprinted upon my memory, should last as one of the top observational thrills (hypered-Kodak moments?) I've had. Riku came in one morning after having just spent some time at the 36" aimed somewhere within the Veil Nebula; he mentioned something about glimpsing heaven, although I don't think he tried to draw it.

The smaller scopes were by no means relegated to less-meaningful duties. All types and sizes of scopes were

# Comet Comments

by Don Machholz

(916) 346-8963 CC210.WPS January 10, 1996

A new comet was discovered on Christmas Day, it is in our morning sky and should reach eighth magnitude next month. Also in our morning sky is Periodic Comet Honda-Mrkos-Pajdusakova, it will approach to within 16 million miles of us in early February. Meanwhile, Periodic Comet Schwassmann-Wachmann 3 fades in our evening sky; one indication is that it has split into four parts, and that this is the cause for its outburst in brightness. Positions for Comet Hale-Bopp are not included this month, it is still behind the sun. Next month it will enter our morning sky.

1995 Y1 (Hyakutake)					
Date	RA-2000-Dec	Elong	Sky	Mag	
01-18	15h57.4m	-17°46'	57°	M	9.1
01-23	16h21.0m	-15°15'	56°	M	8.9
01-28	16h45.3m	-12°19'	57°	M	8.7
02-02	17h10.2m	-09°02'	57°	M	8.5
02-07	17h35.6m	-05°27'	57°	M	8.4
02-12	18h01.7m	-01°40'	56°	M	8.3
02-17	18h26.7m	+02°13'	55°	M	8.2
02-22	18h52.0m	+06°03'	55°	M	8.2
02-27	19h16.8m	+09°43'	54°	M	8.3
03-03	19h40.8m	+13°09'	53°	M	8.4
03-08	20h03.9m	+16°16'	52°	M	8.5
03-13	20h26.0m	+19°04'	52°	M	8.6

Comet activity increased during the second half of 1995. The year produced three visual discoveries by amateur astronomers while only two comets were found by professional astronomers. The decrease in professional discoveries is due in part to the discontinuation of the

earth-crossing search programs. This is still a great time for amateurs to search for new comets. This year we saw the return of old friends: Periodic Comet Borrelly and d'Arrest, and Periodic Comet de Vico—a *real* old friend!

73P/Schwassmann-Wachmann 3					
Date	RA-2000-Dec	Elong	Sky	Mag	
01-18	23h16.9m	-13°07'	48°	E	10.2
01-23	23h28.8m	-11°38'	46°	E	10.3
01-28	23h40.1m	-10°11'	45°	E	10.5
02-02	23h51.1m	-08°47'	43°	E	10.7
02-07	00h01.6m	-07°25'	40°	E	10.9
02-12	00h12.5m	-06°01'	38°	E	11.0
02-17	00h22.3m	-04°45'	36°	E	11.2
02-22	00h31.9m	-03°31'	34°	E	11.3
02-27	00h41.3m	-02°20'	31°	E	11.5
03-03	00h50.4m	-01°12'	29°	E	11.6
03-08	00h59.3m	-00°05'	26°	E	11.8

For the past few months I've been sending these articles to some astronomy club newsletter editors via E-Mail. Please let me know if you would like it sent directly to you. My address is: DonM353259@aol.com.

**C/1995 Y1 (Hyakutake):** This new comet was discovered by Yuji Hyakutake of Japan on Dec. 25 in the morning sky at magnitude 10.5. He was using 25x150 binoculars. It will be in our sky through May.

45P/Honda-Mrkos-Pajdusakova					
Date	RA-2000-Dec	Elong	Sky	Mag	
01-18	19h29.6m	-16°10'	08°	M	7.8
01-23	18h47.4m	-13°39'	23°	M	8.1
01-28	17h51.7m	-09°36'	42°	M	8.5
01-02	16h44.1m	-03°50'	64°	M	8.9
02-07	15h32.1m	+02°46'	88°	M	9.6
02-12	14h25.7m	+08°35'	110°	M	10.5
02-17	13h31.0m	+12°42'	128°	M	11.3
02-22	12h48.7m	+15°16'	143°	M	12.2
02-27	12h16.6m	+16°44'	155°	M	13.1
03-03	11h52.5m	+17°31'	163°	M	13.5
03-08	11h34.4m	+17°51'	166°	M	14.7

### Orbital Elements

Object:	Schwassmann-Wachmann 3	Honda-Mrkos-Pajdusakova	Hyakutake
Peri Date:	1995 09 22.76	1995 12 25.93	1996 02 24.33
Peri Dist:	0.9328 AU	0.5319 AU	1.0536 AU
Arg/Peri (2000)	198.776°	326.061°	046.440°
Asc Node (2000)	069.947°	089.167°	195.749°
Incl (2000):	011.423°	004.250°	054.495°
Eccentricity:	0.694799	0.824302	1.0
Orbital Period:	5.34 yrs	5.27 yrs	Long Period
Reference:	IAU Catalog	MPC 20124	MPC 26374

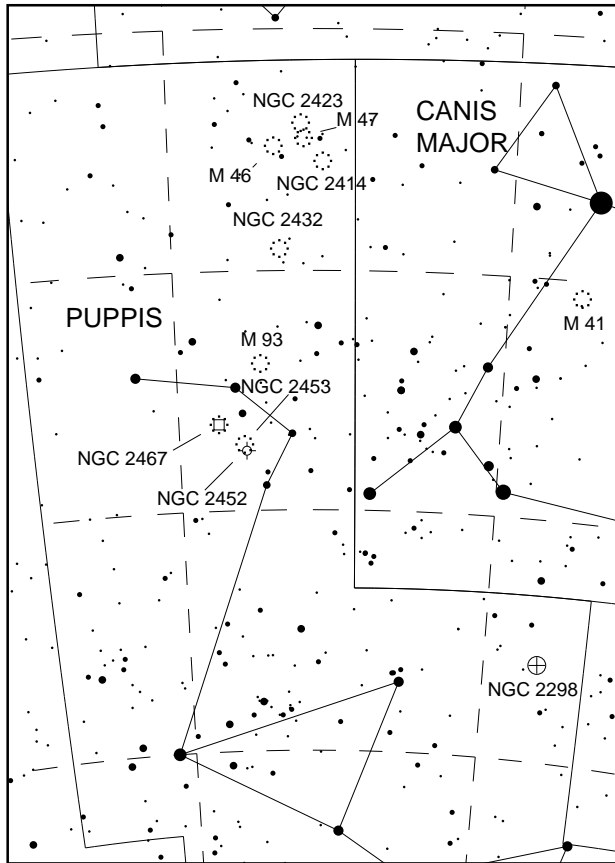
# What's Up

## by Steve Coe

Puppis

February 1996

Puppis is one of those constellations that just comes along with the Messier catalog. As observers decide to learn the sky more thoroughly, many set out to see the list of Charles Messier for themselves. As that project gets going, the constellations which contain "M objects" just naturally get learned. As I have



said before, obviously Puppis is not going to be the first constellation anyone learns, if you honestly see a "Poop Deck" of a ship in this location, then please point it out to me at the next club star party. This month I am going to discuss some of lesser-known objects in the

constellation of Puppis. All my observations are with my 13" f/5.6 Newtonian and are from either Buckeye or Sentinel Arizona.

**NGC 2298** is pretty bright, pretty large, much brighter in the middle, 5 stars are resolved at 200X. This globular grows with averted vision. It was easy in the 11 X 80 finder. It is at 6 hr 49 min and -36 00.

**NGC 2414** is bright, pretty large, not compressed, 22 stars counted at 100X. This cluster consisted of three star chains and an unresolved hazy background. See this nice cluster at 7 hr 33.3 min and -15 27.

**NGC 2423** is pretty bright, large, pretty rich, pretty compressed, 33 stars counted at 100X. A nice binary star is in the center with both components a lovely dark yellow. It is at 7 hr 37.1 min and -13 52.

**NGC 2432** is pretty bright, pretty large, somewhat compressed, 26 stars counted at 135X. This cluster is much elongated (3X1) in PA 0. Averted vision will add in many faint stars within the cluster region. Try it at 7 hr 40.9 min and -19 05.

**NGC 2452** is bright, pretty large, bright middle, round at 270X. This planetary nebula was immediately recognized as non-stellar at 135X. The central bright section was never stellar at any power on a night I rated as 7 out of 10 for seeing. The nebula was a light green color. It is located on the south side of the open cluster NGC 2453. So, there are two places in Puppis where you can see a cluster with a planetary nebula at the edge. The more famous is M-46 with NGC 2438, now try the copy-cat version; cluster NGC 2453 with NGC 2452 at its edge.

**NGC 2453** is pretty bright, pretty small, pretty compressed, not rich. I counted 17 stars, one of 10th mag and the others from 11 to 13 magnitude. The 10th mag star is a nice dark yellow at 135X. This cluster was just seen in the 11X80 finder. It is located at 7 hr 47.8 min -27 14.

**NGC 2467** is bright, pretty large, pretty rich, 31 stars counted at 100X. This cluster was easy in the 11X80 finder. The star cluster is very nice and would generate observers if it were alone, but there is some bright nebulosity associated with this cluster. The nebula was seen without the UHC filter to start, but adding the filter made the nebula much better. There is a bright, round spot of nebulosity on the southwest side of the cluster and several pretty bright streaks on the northeast sections. Covering my head with a dark cloth and using the UHC filter, I could see that the entire field of view was nebulous to some degree. To top is off, there are several dark lanes winding there way through this region. Take a look at this little known cluster with nebulosity at 7 hr 52.6 min and -26 23.

in use and talking to owners affirmed to me that there is certainly no correlation between size of scope and deep sky competency. The TSP group for the most part impressed me as being highly-knowledgeable deep sky observers who had come to spend a significant percentage of time doing serious observing. Nonetheless, the atmosphere was loose and generous time was dedicated by most towards walking the field, taking a look in neighbors' scopes, and just plain chatting. In any event, the behemoth scopes nearly always seemed equipped with lines of anxious observers attached, occasionally in some quasi-momentous discussion related

to the present view. Each morning, Saturn would rise and many of the hardy folks who had outlasted the night would wait for steady air in order to glimpse the gaseous giant near ring-plane crossing. A few times near the end of the week, the planet was high and the air steady enough to get views of a seemingly ringless Saturn. Some of its fainter inner moons had now become plainly visible. All in all, if you had a scope, or visited your neighbors, you had your fill of observing.

The days had their moments as well, with an added bonus of being able to see who you were talking to, often

recognizing someone you had met the night before not by sight but by a characteristic manner of speech. Vendor booths were one of the main epi-centers at the ranch, with present and future business deals going on at any given time. And diversions were there as well. Tom has in his possession an exclusive, yet-to-be-released made-for-TV documentary on the mysterious Marfa Lights which perplex the locals, or at least gives them something to do on hot summer evenings. We added to their community coffers by purchasing "I Saw the Lights" t-shirts in downtown Marfa. Why these lights appear in pairs is a dreadful enigma to some, but we ain't tellin' lest them Marfa town elders (the Marfia?) come to persuade us otherwise.

The afternoon and evening talks included a contribution by Tom on observing the best edge-on galaxies as well

as Riku's overview of amateur astronomy in Finland. The finale was Halton Arp's Saturday evening talk in which he offered evidence suggesting that quasars emanate (are ejected?) from galactic centers. He believes the red-shift is extremely limited in its ability to estimate extra-galactic distances and is probably misleading. Though controversial, he has credible evidence and some serious concerns which do not fit the presently-favored cosmological models. I believe as an encouragement to continue along this less-traveled avenue of study, he was graced with a standing ovation as he left the platform.

Somehow, the days passed as quickly as the nights and the week's end was upon us. Of all the occurrences though, one stands above the others. It was not the Marfa light-related phenomenon such as the Telrad causing a

## The 1996 All-Arizona Messier Marathon

### March 16, 1996

The 1996 All-Arizona Messier Marathon is a one night—all night—observing session held during the new moon of March. The goal is to observe as many entries in Charles Messier's magnificent catalogue as possible; limited only by your observing skills, stamina, and the weather.

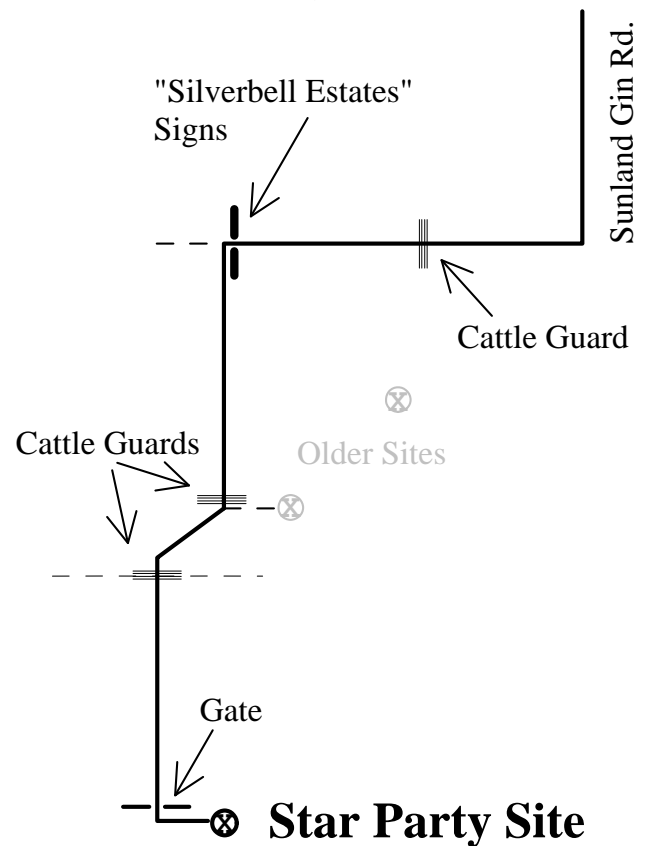
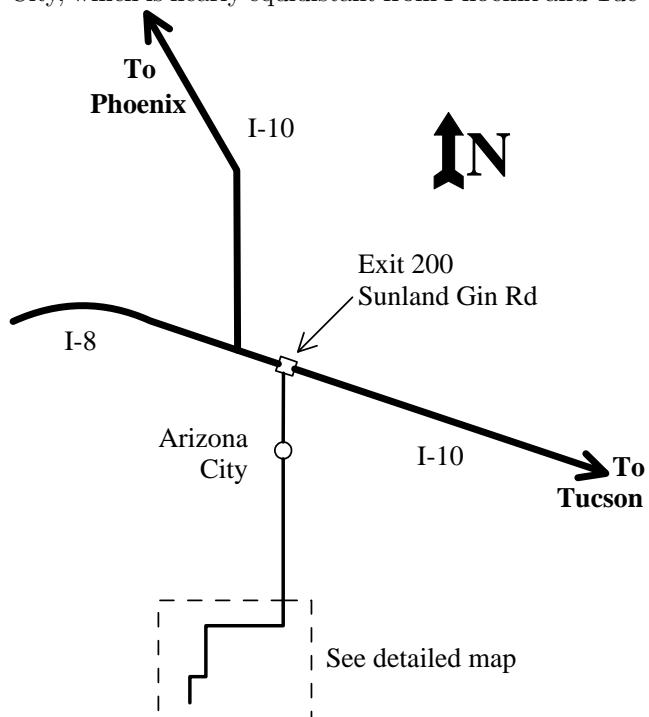
Certificates will be awarded to participants observing 50 or more objects. A plaque, suitable for mounting on your telescope, will be awarded for first, second, and third highest totals achieved, with duplicate awards for ties.

The marathon is held at a new site near Arizona City, which is nearly equidistant from Phoenix and Tuc-

son (see map below). This is the same site as the 1995 All-Arizona Star Party last October.

Invitations have been sent to all known Arizona astronomy clubs and a large turnout is expected. Last year was the largest turnout so far, let's see if we can top it.

For more information, contact A.J. Crayon at 938-3277 or via E-mail: [a.crayon@az05.bull.com](mailto:a.crayon@az05.bull.com).



Take I-10 to exit 200 (Sunland Gin Road.) Turn right (south) after exiting the freeway. After about 15 miles, the pavement ends and about one mile further, the road turns sharply to the west. After another four miles, the main road will turn south just after the "Silverbell Estates" signs. Three miles past the signs, the road will veer off to the west, and five miles further, the road will pass through a gate. Turn left after the gate and continue for another 1/4 mile to the site.

thunderbolt or the odor-eating Marfalite rock outlet appearing in Alpine. Not even the time I had the exact change at a diner. Instead, to watch someone eat a McDonald's hamburger for breakfast, one for lunch, and yet another for dinner on the same day will leave a lasting impression upon me. You deserve how many breaks today, Riku?

## Bits and Pieces

### Coming Events

#### Star Parties

Messier Marathon	Mar. 16
Sentinel Star Gaze	Apr. 13
Texas Star Party	May 12-19
RTMC	May 24-26
Grand Canyon	Jun. 8-15

## Minutes of the January Meeting

SAC President Gerry Rattley opened the January meeting and thanked the outgoing officers for all of their work over the last year.

Visitors were asked to introduce themselves. We had two visitors and two new members tonight.

Regina Lawless gave the Treasurer's report.

Gerry mentioned that there would be some star party date changes in future issues of the newsletter.

A.J. Crayon talked about the Deep Sky Group meeting at the McGrath's house. He also talked about the upcoming Messier Marathon in March. A.J. presented the SAC Messier Observing Award to Paul Dickson.

Rich Walker talked about the upcoming Public Star parties. For Show and Tell, Pierre Schwaar showed some slides taken when he attempted to see a record Old Moon.

There were about 50 people present at the break.

The main speaker was Dr. Jeff Hester from ASU. His talk centered on how the HST can help in studying nebulae. The talk was titled "Nebular Microbiology with the

## The 1996 Sentinel Star Gaze

### April 13, 1996

This is the fifth annual Sentinel Star Gaze, sponsored by SAC's Deep Sky Group. Sentinel is a remote site situated between Gila Bend and Yuma (about 100 miles southwest of Phoenix) making for a very dark sky. On the day of the event sunset is just after 7 PM, with twilight ending at 8:30. Those staying the entire night can expect the Moon to rise at 4 AM, twilight starting at 4:40, and sunrise at 6:04 AM. For those of you with computers, the Sentinel site is at 32° 49.7' North by 113° 12' West, at 625 feet above sea level.

Although this is officially a one night event, frequently observers get a head-start by arriving the night before, to get an extra night of observing.

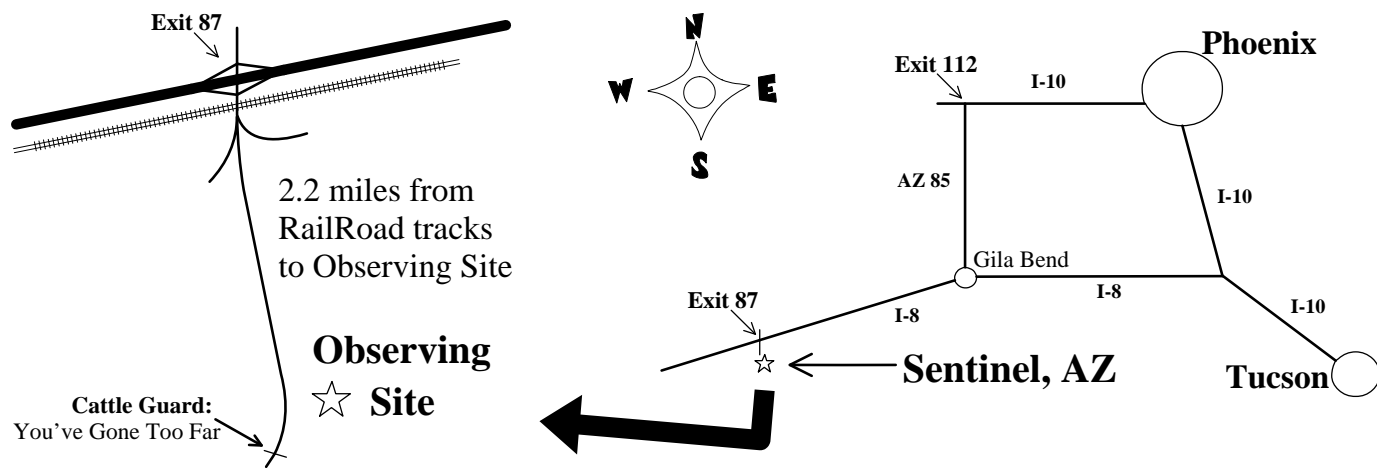
Sentinel is a good two hours drive southwest from down-town Phoenix. Please try to arrive before sunset. A Port-a-Pottie will be provided, but there are no other

facilities. Expect cold weather and hungry flying insects during twilight — let's hope we get neither.

For more information, contact Steve Coe at 789-7786 or via E-mail: 74040@compuserve.com.

### Star Party Etiquette

1. **Do Not Litter!** If you bring it with you, please take it when you leave.
2. **No White Lights after Dark!** Use only dim red lights after sundown.
3. **Park Based on Your Observing Plan. Plan Your Departure.** Park facing towards the exit to avoid using your backup lights.
4. **Bring Observers Only.** Please leave small children and pets at home.
5. **Keep Noise to a Minimum.**



Hubble Space Telescope.”

We adjourned to JB’s.

—David Fredericksen, SAC Secretary

## People Wanted For Private Star Parties

The Saguaro Astronomy Club does at least three Public Star Parties during the year. Two are usually held in the Spring and another in the Fall. But less publicized are the private star parties.

From time to time the club get a phone call requesting private star parties from schools, Boy and Girl Scout Troops, and other non-profit organizations. By and large we have a fairly good turn out. But since the lead time on these star parties is usually too short to get them into the newsletter, you seldom read about them in the newsletter.

If you want to help with these star parties or wish to set one up, you should contact Rich Walker (997-0711). He maintains a list of people who he can contact to attend these star parties. He usually can give you at least a week’s notice prior to one of these star parties.

## Newsletter Deadline

Mail items for Such-a-Deal at least two weeks before the end of the month. Articles that need to be published in a timely fashion must be submitted or the newsletter editor notified of the article at least 6 weeks before month they are published. Items arriving too late for an issue will be included in the next newsletter.

# SACNEWS Puzzle #1

## Revisited

by Paul Dickson

CCD DUCAL CUP PAPA SAFE PAT PIG HOE
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It’s been two months since I first published this puzzle. At the January SAC meeting I gave a clue, but I haven’t heard if anyone has solve this yet. So, guess that the puzzle is way too hard and I’ll have to make it easier for all of you.

To reprise: the above five items can be transformed into words astronomers all know. A star chart will help, but the transform for converting these words was frozen decades ago.

At the January meeting I told everyone that the key to this is that the list refers to constellations. The first entry CCD is Ursa Minor.

Given the length of time this puzzle has been unsolved, I’ll give you the solution but not the answers. CCD refers to the constellations that border Ursa Minor. Finding the answers to the remaining four is not quite as simple as you might first think. I misplaced my answer sheet a couple of weeks ago and it took me about 5 minutes to figure out the solution to DUCAL CUP.

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## ’98 Eclipse Cruise — by Steve Coe

I am just gathering some info on a cruise to the Feb. 26, 1998 total solar eclipse. We are looking at the possibility of either chartering our own ship, probably from Holland American Line, leaving San Juan Puerto Rico, with a stop at St. Thomas, plus another stop and then on to Aruba for the eclipse on that Thursday. This depends on the amount of hurricane damage to St. Thomas. and so all that can be said right now is that there will be two stops in route to Aruba.

Whatever the scenario, a deposit of \$500 will be needed to confirm and hold your space on the cruise. With the total amount due by Dec. 1, 1997. The complete cruise package will range from \$1850 to \$3500 per person, this includes air fare from your departure city to San Juan.

The category and location of your cabin on the ship will determine the price.

So, our travel agent for this rendezvous with darkness at noon is **Barbara Philips** at Regency Travel in Scottsdale, Arizona. She is not an astronomer, but is learning by being around me for several hours. Barbara can certainly answer any questions you might have concerning the cruise ships or accommodations. You may reach her at (602) 596-6787, or (800) 796-8024 outside AZ.

I know this seems very distant, but putting a group of this size together requires advance planning. I have no doubt that a winter eclipse in the Caribbean will attract large numbers of observers, so get on the phone to Barbara if you are interested in sailing with us.

# Grand Canyon Star Party '96

## South and North Rim

### June 8–15

Well boys and girls, it is time once again to make plans for that perfect summer getaway—the Grand Canyon Star Party! Where else can you go to keep the family happy and occupied all day, and the dark nights will keep even the most jaded of astronomers smiling all night long? Also, for the first time, we will be offering a North Rim version this year.

#### What is the Grand Canyon Star Party?

Its current revision started in 1991 as the first anniversary of Dean and Vicki Ketelsen's honeymoon there. It was noticed that a telescope set up looking at the Canyon or sky soon gathered a crowd, so a public oriented event was planned. Though tens of thousands visit every day, a small fraction stay overnight to be treated to the spectacular views of the night sky there. The appreciative tourists tend to leave early, leaving the astronomers in solitude for observing far into the night. The last few years we have had solitary access to a clearing behind a locked gate so you can leave your scope set up for the duration of your stay

The Grand Canyon Star Party originally started much earlier as a function of the San Francisco Sidewalk Astronomers who made annual pilgrimages to several western National Parks in the late '70s and '80s, spending several weeks at each stop. The latest version of the star party has been readily endorsed by several of their members who have become regular attendees.

#### What is there to do there?

Well, the Grand Canyon offers world class hiking through Earth's largest canyon system. Even those less physically inclined can spend days exploring the scenic vistas offered from every bend of the rim trail, or from the roads from their cars or park shuttle buses. The place offers lots to explore for the history buff with many original structures preserved and a nearly century old train making daily runs to the rim. The area offers astronomical day trips to Lowell Observatory or Meteor Crater, as well as scenic drives through Monument Valley, the Painted Desert, Flagstaff and Oak Creek Canyon. One could easily spend a couple action packed days or the entire week without repeating yourself.

#### How is the observing at the Canyon?

Conditions are excellent. The nearest town, Flagstaff—population 45,000, is 80 miles away, while Las Vegas and Phoenix are both about 170 air miles away making for very dark skies. Elevation at the South Rim is about 7,000 feet with the North about 8,000 feet. Seeing conditions are usually very good with the exception of very still nights when pockets of cold air move through slowly disrupting the seeing. Early June is

Arizona's clearest time. We have not had a night lost to clouds in over three years (over 24 clear nights in a row)! 'Nuff said!

#### Where would we stay?

That is the big question for every Canyon visitor during the summer. By anyone's opinion, the Canyon is overcrowded in June and most housing has been booked up months in advance. If you need a room to stay in, you had best start NOW (I'm writing this before Christmas). Even in March you will likely have to search around for a room. If you can stand the 7 mile drive to Tusayan, there are also a number of motels there. Check out the list below. The campground is very nice if you enjoy roughing it a little. It is amazing how well you sleep on the ground when you are up all day and most of the night! Campsites are generally available a day or two ahead of time (\$10/night). The Park Service also gives us a few complimentary campsites which we make available first come, first served after March 1st. RV parking with a full hookup is available in Trailer Village (\$17/night). Again, early reservations are advised.

#### Any special activities planned?

I'm glad you asked that. As part of our program, we offer a twilight talk every evening to entertain the folks while it gets dark. We always need volunteers to give these talks, so step up especially if you have an astronomical story to tell and have worked with crowds before. Also for the first time, the San Francisco Sidewalk Astronomers have stepped up and offered to grind and polish a telescope mirror and put together a telescope for the local school. There will likely be daily demonstrations and you may get put to work. Also we generally have a couple social cookouts to get to know the astronomical folk who come. These are great fun and you get to actually see the faces of the guy you have set up next to the last 4 nights!

#### Sounds great! How do I let you know I'm coming?

If you need further information, or to let us know you would like to volunteer by bringing a telescope, PLEASE let us know at the address below. The space in the observing field is limited and we need to know how many folks we have coming that are bringing scopes. Be sure to have some housing plans before you let us know you are coming!

For **South Rim information**, write: Dean Ketelsen, 1122 East Greenlee Pl., Tucson, AZ 85719, (520) 293-2855 [ketelsen@as.arizona.edu](mailto:ketelsen@as.arizona.edu)

For **North Rim information**, write: Dely Pierce, P.O. Box 674, Farmington, UT, (801) 451-8215

South Rim Lodging: (all area code 520) All rim lodging or Trailer Village (Fred Harvey, Inc) 638-2401 Campsites (MISTIX—no more than 8 weeks in advance) (800) 365-2267. Housing in Tusayan (7 miles south of Grand Canyon): Squire Inn 638-2681, Moqui Lodge 638-2424, Quality Inn 638-2673, Red Feather Lodge 638-2414, and Seven Mile Lodge 638-2291.

North Rim Lodging—(801) 586-7686 North Rim Camping (MISTIX—no more than 8 weeks in advance) (800) 365-2267.

# February 1996

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				<b>PAS Meeting</b> Brophy Prep. Physics Lab 1	<b>SAC Meeting</b> Grand Canyon University, Fleming Rm. 105 2	Yesterday Venus 1.1° of Saturn 3
Full Moon 8:59 A.M. Clyde Tombaugh Born 1906 4	<b>Sunday, Feb. 11, 7 A.M.:</b> Mercury 0.07° of Neptune Mercury at greatest elongation 25.9° (morning)					<b>SAC Star Party</b> Buckeye Hills (members&guests) 10
Earth passes through the plane of Saturn's rings 11	Last Quarter Moon 1:38 A.M. 12		<b>EVAC Meeting</b> (SCC: Rm. PS172) 14		Sun enters Aquarius 4 P.M. 16	Yesterday Mercury 0.25° of Uranus (morning) 17
New Moon 4:32 P.M. 18	Mir Space Station Launched (1986) 19	Mars at Perihelion 20			<b>Friday and Saturday, Feb. 16 &amp; 17:</b> Jupiter, Neptune, Uranus, Mercury and the Moon are together in the sky (morning) 23 24	
First Quarter Moon 10:52 P.M. 25				<b>Leap Day</b> 29	All Times are Mountain Standard Time	

## Magazines & Discounts

Club members may subscribe to astronomical magazines at reduced rates through the club Treasurer. See the Member Services Form on the back page of this newsletter. Furthermore, club members are encouraged to align their subscriptions with the Jan.–Dec. calendar year. This eases the burden both on the Treasurer and the Publisher by permitting a single Group Renewal to be placed in the autumn for the upcoming calendar year.

Those members who experience problems with their subscriptions to *Astronomy* magazine may call Kalmbach Publishing Customer Service at (800) 446-5489.

Those members who experience problems with their subscriptions to *Sky & Telescope* magazine may call Sky

Publishing at (800) 253-0245.

Besides the club discount on *Sky & Telescope* magazine, Sky Publishing offers club members a 10% discount on all other Sky publications. This means books, star atlases, observing aids, Spotlight prints, videos, globes, computer software, and more.

Club members who subscribe to *Sky & Telescope* through the Club Discount Plan may order Sky publications directly, at the above toll-free number, without going through the club Treasurer. Simply mention the Club Discount Plan and give the Saguaro Astronomy Club name to receive the discount. Sky Publishing will check their records to verify that you are eligible to receive the discount.

## Saguaro Astronomy Club Member Services Form

### Membership

Memberships are for the calendar year and are prorated as follows: Jan - Mar 100%, Apr - Jun 75%, Jul - Sep 50%, Oct - Dec 25%.

- \$28.....Individual Membership
- \$42.....Family Membership (one newsletter)
- \$100.....Business Membership (includes advertising)
- \$4.....Nametag for members
- \$14.....Newsletter Only

### Subscriptions

The following magazines are available to members. Subscribe or renew by paying the club treasurer. You will receive the discounted club rate only by allowing the club treasurer to renew your subscription.

- Sky & Telescope.....\$24.00 for one year
- Astronomy.....\$20.00 for one year

Write your name, address, and phone number in the space below.

Make checks payable to SAC.  
Mail the completed form to:

Regina Lawless  
SAC Treasurer  
5808 E Turquoise,  
Scottsdale AZ 85253

## SAC and SAC Meetings

Saguaro Astronomy Club (SAC) was formed in 1977 to promote fellowship and the exchange of scientific information among its members—amateur astronomers. SAC meets monthly for both general meetings and star parties, and regularly conducts and supports public programs on astronomy.

SAC meetings are usually held on the Friday nearest the full moon. This means that over the course of the year, meetings are not held on same week of the month. The same is true of the club's star parties. Star parties at Buckeye Hills are mostly held on the Saturday of the third quarter moon.

### 1996 SAC Meetings

Jan. 5  
Feb. 2  
Mar. 8  
Apr. 5  
May 31  
Jun. 28  
Jul. 26  
Aug. 30  
Sep. 27  
Oct. 25  
Nov. 22  
Dec. 14 Party

### 1996 SAC Star Parties

Date	Sunset	Moonrise
Jan. 20	5:48pm	8:50am
Feb. 10	6:08pm	12:10am
Mar. 16	6:36pm	5:16am
Apr. 13	7:02pm	4:00am
May 11	7:16pm	2:34am
Jun. 8	7:33pm	1:15am
Jul. 6	7:43pm	11:57pm
Aug. 10	7:16pm	4:46am
Sep. 7	6:43pm	2:26am
Oct. 5	6:06pm	1:11am
Nov. 2	5:35pm	11:54pm
Dec. 7	5:21pm	5:02am

**SAC General Meetings** 7:30 PM at Grand Canyon University, Fleming Building, Room 105 — one mile west of Interstate 17 on Camelback Rd., north on 33rd Ave., second building on the right.

## SACNEWS

c/o Paul Dickson  
7714 N 36th Avenue  
Phoenix AZ 85051

Stamp

First Class Mail

### Inside:

- Texas Star Party '95 by Bernie Sanden
- Dim Moments by Paul Dickson
- Comet Comments by Don Machholz
- What's Up by Steve Coe
- 1996 Messier Marathon
- 1996 Sentinel Star Gaze
- People for Private Star Parties
- SAC Puzzle #1 Revisited
- 1996 Grand Canyon Star Party